Ceres

Sustainability is the bottom line.

Corporate Electric Vehicle (EV) Programs

NH Green Your Fleet Day

June 1, 2018

What is Ceres?

Ceres is a **sustainability nonprofit organization** that works with many of the largest and most influential investors and companies in many different ways to build leadership and drive solutions throughout the economy.

Through our powerful networks, we ensure investors and companies factor sustainability into everything they do - from investment decisions to business practices within operations and global supply chains - all the way up to the boardroom.

We also mobilize investors and companies to advocate for stronger policies on climate change, clean energy, and water.

Through our thought leadership and advocacy campaigns, we make the business case for sustainability.

We believe ***sustainability is the bottom line***.

How do we do it?

Ceres Investor Network on Climate Risk and Sustainability: 145+ investors managing $23 trillion in assets: advances sustainable investment practices and engages with companies and policymakers on sustainability issues. E.g., BlackRock, Fidelity Investments, State Street Global Advisors

Ceres Company Network: 50+ companies, including many Fortune 500s: sets the highest bar for sustainability leadership and integrates environmental and social practices and good governance into core strategies. E.g., Bank of America, NIKE, Inc., Target

Ceres Policy (BICEP) Network: 45+ companies, including many leading consumer brands: advocates for stronger climate and energy policies at the state and federal level. E.g., L'Oreal, Starbucks and Unilever.

Electric Vehicles

Electric Vehicle Goal Areas

How can companies go all-electric and encourage their employees to do the same?

Electrify Your Fleet

Install Workplace Charging*

Educate Staff & Customers/Offer Incentives

* Source: U.S. National Renewable Energy Laboratory (NREL)

The Business Case

- Fuel and Maintenance Savings
- Fuel Supply and Price Stability
- Workforce Recruitment and Retention
- Reputational Benefits
- Safety Benefits

Getting Started

- **Electrifying your fleet**:
  - Set a goal!
    - Example: 100% of light-duty fleet, 50% of medium-duty fleet by 2030.
  - Prepare a feasibility/scoping study
    - Collect data to determine how you use your vehicles
    - Use software to identify electric vehicle types that will meet fleet needs and pinpoint the “low hanging fruit”
  - Launch pilot program
  - Develop a vehicle replacement plan and timeline
  - Act on plan
  - Monitor progress

How to get started

- **Workplace Charging Program**:
  - **Identify critical stakeholders** for your property (easiest if you control the parking area, building, electrical infrastructure)
  - Develop an **employee commute/EVSE demand survey**
    - Trip distance
    - EV ownership/interest
    - Charging availability at home
    - Willingness to pay for charging
  - Engage with **key stakeholders**
  - Make a **plan (include charging guidelines & budget)** and set a **goal**
  - **Obtain permits, install** charging stations, obtain **final approval**

Workplace Charging: Example Considerations

- **Utility**
  - Electrical needs
  - Load management/metering
  - Rate structure
- **Employee**
  - Demand
- **Property Owner/Facility Manager**
  - Ownership/Maintenance responsibilities
  - Cost sharing
  - User payment, # of units
  - Siting
- **Governing Authority**
  - Permits
- **EVSE Supplier**
  - Charging level, # of units
  - Payment/Maintenance options
  - Networked v. non-networked
- **Contractor/Electrician**
  - Site assessment (wiring, safety, zoning, other requirements)
  - Draw up plan (construction, electrical needs, metering)

Workplace Charging: Ownership

Workplace Charging Scenarios

Easiest: The employer owns the building and parking lots; electricity is accessible, and upgrades are not needed.

Easy: The employer owns the building and parking lots; electricity is accessible, but upgrades may be needed.

Moderate: The employer leases building space and parking lots; electricity is accessible, but upgrades are needed.

Challenging: The employer leases building space and uses independently operated parking; electricity is inaccessible.

*DOE Workplace Charging Challenge (Plug-In Electric Vehicle Handbook for Workplace Charging Hosts)

Workplace Charging: Types of Charging

AC Level 1 Charging	AC Level 2 Charging	DC Fast Charging
2 to 5 miles of range per 1 hour of charging	10 to 20 miles of range per 1 hour of charging	60 to 80 miles of range per 20 minutes of charging
 J1772 charge port	 J1772 charge port	 J1772 combo;  CHAdeMO;  Tesla combo
EVSE: $500-$1,000	$500-$8,000	$15,000-$40,0000

Upgrades, Installation & Permitting costs

*DOE Alternative Fuels Data Center (AFDC)

Workplace Charging: Network?

- “Dumb” chargers
  - Non-networked (no usage data)
  - Better at low-use sites – cheaper
  - Cannot accept payment w/o software
- Networked
  - If turnkey, full service
  - Accept payment (different prices for different users (RFID))
  - Usage data
  - Smart charging (block charging at peak times)
  - Maintenance

Workplace Charging: Payment

- **Options:**
  - Offer **free charging** to employees as a benefit of owning a clean car
  - **Charge to charge**: different options, but encourages employees to move their vehicle after a set period of time

- **If you require payment:**
  - Can charge based on cost of electricity or time spent charging
    - Monthly fee for unlimited
    - Cost of electricity
    - Cost of electricity + extra to help cover network management fee
    - Low cost until you hit a certain time threshold, then increase to disincentivize parking.

Questions?

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